

# Operating Instructions

## *Navigation System FIELD-Nav on Displays with Buttons*



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30302437-02-US

Read and follow these operating instructions.

Keep these operating instructions for future reference.

## Document

Operating Instructions

Product: Navigation System FIELD-Nav on Displays with Buttons

Document number: 30302437-02-US

Mueller-Electronics, Inc.

P.O. Box 627

801 Clayridge Drive

Wakarusa IN 46573

USA

Phone: 855.634.7628 (855 – MEISOBUS)

Fax: 574.862.2610

Email: [info@mueller-electronics.com](mailto:info@mueller-electronics.com)

Website: <http://www.mueller-electronics.com>

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# 1 For your safety

## 1.1 Basic safety instructions



Please read the following safety instructions carefully before using the product for the first time.

- Do not work with the navigation system while driving!  
If you work with the display while driving on a public road, you will be distracted and can cause an accident. If you need to control the display, bring the vehicle to a stop in a safe place.
- Do not blindly trust the navigation system!  
The navigation system is a navigation guide and only recommends a route or provides instructions on where to turn. These instructions do not free you from your due care and your own responsibility. The current traffic rules and the current traffic situation must always prevail over the instructions of the navigation system.
- Following traffic rules always takes priority!  
The map material in the navigation system features a large portion of, but by no means all restrictions that may apply to your vehicle. Remember that traffic rules may have changed on the route suggested by the navigation system. Always follow traffic rules.
- Take care of the map material!  
No restrictions are generally included for the field and forest roads in the navigation system. General passability or permission to use a road cannot be guaranteed by the navigation system. Before entering a field or forest road, the driver himself/herself must decide whether the road ahead can be passed and whether he/she is allowed to do so.  
Certain restrictions for all roads can be added through the PC software. Also in this case, the navigation system only gives a recommendation and the driver must decide whether the respective road is passable and whether it is allowed to use the road. The user bears sole responsibility for any roads and attributes changed.
- Observe all applicable regulations on accident prevention.
- Follow all recognized safety, industrial and medical rules as well as all road traffic laws.

## 1.2 Designated use

FIELD-Nav is a navigation system for agricultural use. It navigates the driver through public roads, forest roads and field roads up to the field.

The special feature of FIELD-Nav is the possibility of showing only roads that are suitable for the vehicle.

The driver and operator are responsible for keeping the map material up-to-date and for ensuring that correct vehicle and route data have been entered.

## 1.3 Layout and meaning of warnings

All safety instructions found in these Operating Instructions are composed in accordance with the following pattern:

## NOTICE

This signal word identifies actions which could lead to operational malfunctions if performed incorrectly.

These actions require that you operate in a precise and cautious manner in order to produce optimum work results.

There are some actions that need to be performed in several steps. If there is a risk involved in carrying out any of these steps, a safety warning will appear in the instructions themselves.

Safety instructions always directly precede the step involving risk and can be identified by their bold font type and a signal word.

### Example

1. **NOTICE!** This is a notice. It warns that there is a risk involved in the next step.
2. Step involving risk.

## 1.4

### Layout of references

If any references are given in these Operating Instructions, they will appear thus:

Example of a reference : [→ 6]

References can be identified by their square brackets and an arrow. The number following the arrow shows you on what page the chapter starts where you can find further information.

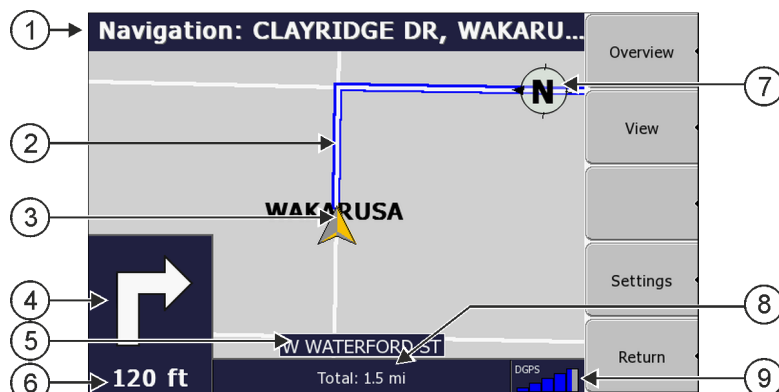
## 2 Product description

### 2.1 Navigation screen

The navigation screen is the screen shown on the display during navigation to a destination.

#### Illustration

In the picture below you can see what information the navigation screen may contain:



Information in the navigation screen





















①	Destination of navigation	⑥	Distance to next change of direction. As you are approaching the change of direction, the distance is growing smaller. As soon as you reach the point where the direction must be changed, no distance is displayed any longer.
②	Marking of selected route	⑦	Compass
③	Position and direction of travel of the vehicle	⑧	Distance to destination
④	Next change of direction The arrow indicates the direction to be followed next.	⑨	Quality of GPS connection
⑤	Name of the street you are on		

#### Controls











Function icon / control element	Function
Overview	Switch to the "Route overview" screen [→ 23]
View	Change view: - 2D map view - orientate map to the north. - 2D direction of travel - orientate map in the direction of travel.
Settings	Changing software settings [→ 32]
Return	Cancel navigation. Return to the previous screen.
	Zoom in/out view.

#### Legend

Street colors:

Icon in day mode	Meaning	Icon in night mode
	Highways	
	Federal highways, express ways	
	Paved field roads	
	Unpaved field roads	
	Paved forest roads	
	Unpaved forest roads	
	Streets and side streets in municipalities	
	Country roads and district roads	
	Calculated route	
	Field boundaries	

Area colors:

Color in day mode	Meaning	Color in night mode
	Forests	
	Waterways	
	Marked fields	
	Background color of map	
	Urban areas	

## 2.2

### FIELD-Nav start screen

The start screen of FIELD-Nav appears when starting the navigation system. From this screen you can access further functions.

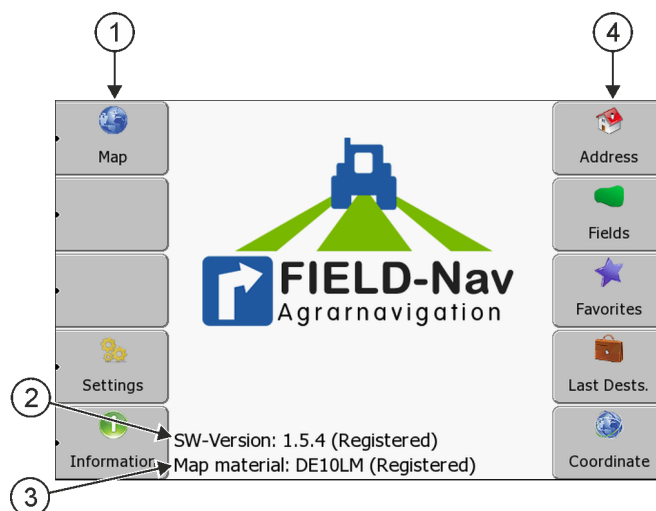
#### Procedure

This is how you call up the start screen when another screen is open:

1. Press "Return" and hold until the start screen appears.

In the picture below you can see what information the start screen of FIELD-Nav can contain:





Start screen of the FIELD-Nav application

①	Function icons	③	Map material version In brackets you can see the registration status
②	Software version In brackets you can see the registration status	④	Function icons

## Controls

Function icon	Function
Map	Calls up the navigation screen [→ 7] Used for driving. Does not navigate to any destination.
Settings	Calls up the screen: "Settings" Intended for software settings [→ 32].
Information	Calls up the screen: "Information" Shows information about the software version and plug-ins used. You can also view the display's system information and start a demo. [→ 10]
Address	Calls up the screen: "Navigate to: address" Intended for entering an address as the destination for navigation. [→ 13]
Fields	Calls up the screen: "Navigate to: Field" Intended for field administration and navigation to fields [→ 16].
Favorites	Calls up the screen: "Navigate to: Favorite" Intended for navigation to destinations saved as "Favorites". [→ 16]
Last Dests.	Calls up the screen: "Navigate to: Last Dests." Intended for navigation to last destinations [→ 17].
Coordinate	Calls up the screen: "Navigate to: Coordinate" Intended for entering a coordinate as the destination for navigation. [→ 18]

## 2.3

### "Information" screen

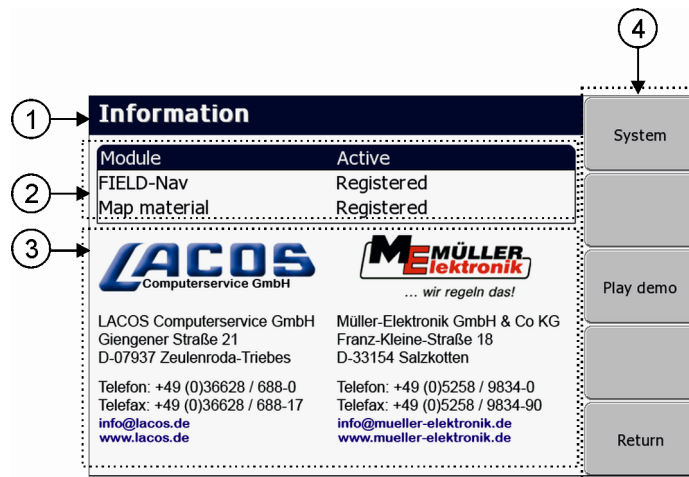
Manufacturer information appears on the "Information" screen. From this screen you can also call up additional information or a demo.

#### Procedure

This is how you call up the "Information" screen:

1. Open the start screen.
2. Press "Information".


In the picture below you can see what information appears in the "Information" screen:



"Information" screen

①	Screen name	③	Manufacturer information
②	Registration information	④	Function icons

#### Controls

Function icon	Function
System	Shows additional information about registration.
Play Demo	Plays a demo.  - Press to cancel the demo.
Return	Exits the screen.

## 3 Starting FIELD-Nav

### Preconditions

To use this module, you need to meet the following preconditions:

- Plug-in "FIELD-Nav" must be activated.
- The license "FIELD-Nav" must be activated.
- You need the FIELD-Nav map material for your region.
- The license "FIELD-Nav Maps" must be activated.

To learn how to activate plug-ins and licenses, read the installation and operating instructions of the display.

### 3.1

## Starting FIELD-Nav for the first time

During the initial start of FIELD-Nav you have to prepare a USB memory device with the map material.

### NOTICE


#### Data loss when using a third-party USB memory device

Using an USB memory device which you did not obtain from Mueller-Electronics can lead to contact problems or write errors. This can lead to data loss.

- Only use USB memory devices which you obtained from Mueller-Electronics.

### Procedure

This is how you proceed, when you start FIELD-Nav for the first time on a Mueller-Electronics display.

1. Insert an empty USB memory device into the display.
2. Switch the display to ON.
3.  - Open the "Selection menu" application.  
⇒ The selection menu will appear.
4. Call up the FIELD-Nav application:



⇒ The display will create the "FieldNav" folder on the USB memory device. This folder contains data for display identification. You need this data to prepare the map material with FIELD-Nav Desktop.

⇒ The following screen will appear:



5. Remove the USB memory device.
6. Connect the USB memory device to the PC.


7. Start FIELD-Nav Desktop.
  8. Read the display ID from the USB memory device with FIELD-Nav Desktop. The procedure is described in the operating instructions for FIELD-Nav Desktop.
- ⇒ There is map material on the USB memory device.
- ⇒ Now you can work with FIELD-Nav.

## 3.2

### Starting FIELD-Nav for work

#### Procedure

This is how you start FIELD-Nav on the display from Mueller-Electronics:

1. Insert the USB memory device with map material into the display. If there is no map material on the USB memory device, you cannot work with FIELD-Nav.
2. Switch the display to ON.
3.  - Open the "Selection menu" application.  
⇒ The selection menu will appear.
4. Call up the FIELD-Nav application:



- ⇒ Navigation data is loaded from the USB memory device and benchmarked against the data stored in the display. This can take several seconds.
- ⇒ The following screen appears:



- ⇒ You have opened the start screen of the "FIELD-Nav" application.
- ⇒ Now you can work with FIELD-Nav.

## 4 Navigating

The chapters below will provide all the information you need to know to be able to start navigation to a destination.

### 4.1 Basic procedure

Navigation to a destination always involves following phases:

1. Selecting the destination of navigation.
2. Preparing navigation.
3. Starting navigation.
4. Navigating.

Depending on the software configuration, integration of other systems and your personal preference, you can execute these phases in different ways.

Read the chapters below to learn more.

### 4.2 Selecting the destination of navigation

The navigation destination can be selected in the following ways:

- Entering destination address [→ 13]
- Selecting field [→ 16]
- Selecting destination saved as a "Favorites" [→ 16]
- Selecting one of the last destinations [→ 17]
- Entering destination coordinate [→ 18]
- Taking a destination from the "ISOBUS-TC" application [→ 19]

#### 4.2.1 Navigating to: Address

If you know the address of the destination, you can start navigation to that address.

##### Procedure

This is how you enter an address:

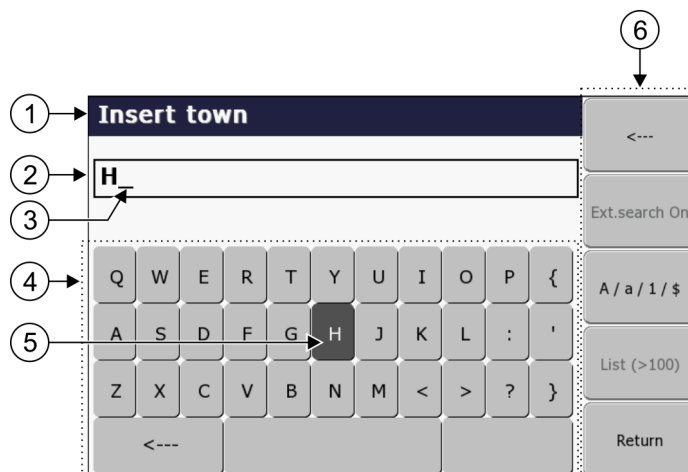
1. Open the start screen.
2. Press "Address".  
⇒ The following screen appears: "Navigate to: address"
3. Press "Town" and search for a town.  
⇒ The data input screen appears.
4. Find the required town in the data input screen. [→ 14]  
⇒ The town you have selected now appears in the screen "Navigate to: address"
5. Press "Street" and search for a street in the town selected. This input is optional.  
⇒ The data input screen appears.
6. Find the required street in the data input screen.  
⇒ The street you have selected now appears in the screen "Navigate to: address"
7. Press "Number" and enter the house number. This input is optional.  
⇒ The data input screen appears.

8. Find the house number in the data input screen.  
⇒ The number you have entered now appears in the screen "Navigate to: address"
9. Press "Navigate" to finish your search for destination.  
⇒ Navigation screen [→ 7] or screen: "Preparing navigation" [→ 21] appears.

### Entering town and street on the keyboard

In this chapter you will learn how to search for towns and streets in the search engine. This chapter explains the procedure on the example of a search for a town, but for streets the search is the same.



In the picture below you can see the structure of the data input screen:



Data input screen

①	Title	④	Displayed keyboard
②	Input box	⑤	Cursor on the keyboard
③	Cursor in input box	⑥	Function icons

### Controls

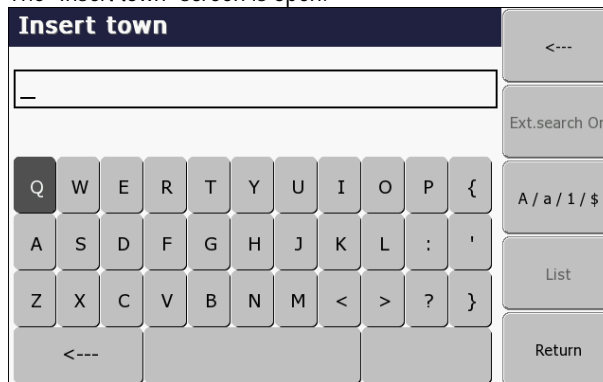
Control element or text on function key	Function
	Turn the rotary knob to mark a letter on the keyboard.
	Click with the rotary knob to select the letter you have marked.
< - - -	Delete letters in input box
Ext . search On	Activates extended search.  Extended search is intended for finding streets and towns located in proximity to the town you are searching for. You can search city districts of a town or streets in city districts.
A / a / 1 / \$	Change keyboard.  The following keyboards are available:  - big letters  - small letters



Control element or text on function key	Function
	- numbers - special signs
List	Shows the list with search results.
Return	Leave screen and abort input.
OK	Confirm

## Procedure

This is how you search for a destination:

- ☒ The "Insert town" screen is open:

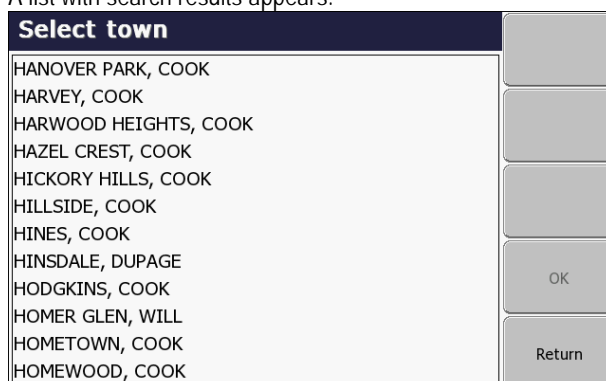



1.  - Turn the rotary knob to mark a letter on the keyboard.
2.  - Click with the rotary knob to select the letter you have marked.
  - ⇒ The letter appears in the input box.
  - ⇒ On the function icon "List" the amount of records found during the search appears.



3. Press "List".

⇒ A list with search results appears.




4. If the required destination is not in the list, the destination may be located in a suburb. In this case:  
Press "Return" and activate "Ext.search On". Then repeat the search.
5.  - Turn the rotary knob to mark the required town in the list with the green cursor.
6. Press "OK".  
⇒ The "Navigate to: address" screen appears.
7. Read more in chapter: Navigating to: Address [→ 13]

## 4.2.2

### Navigating to: Field

#### Procedure

This is how you navigate to a field you have saved previously:

- ☒ You have created the field in the master data and either marked its field boundary or set a point of entry.
  - ☒ Recommendation: The field has a point of entry
1. Open the start screen.
  2. Press "Fields".  
⇒ The following screen appears: "Navigate to: Field"  
⇒ The screen shows all fields allocated to the farm you have selected.
  3.  - click the required field.  
⇒ The following screen appears: "Preparing navigation"
  4. If your field has several entrances: Press "Navigate" to select the field entrance that should be navigated to.
  5. Press "Navigation".  
⇒ Navigation screen [→ 7] or screen: "Preparing navigation" [→ 21] appears.

## 4.2.3

### Navigating to: Favorite


You can save a destination as a "Favorite" if you know its coordinates and navigate to these coordinates [→ 18]. You can also create [→ 32] favorites.

#### Procedure

This is how you navigate to a destination previously saved:

1. Open the start screen.



2. Press "Favorites".
  - ⇒ The following screen appears: "Navigate to: Favorite"
  - ⇒ The screen shows the destinations already created.
3.  - click the required destination.
  - ⇒ Navigation screen [→ 7] or screen: "Preparing navigation" [→ 21] appears.

#### 4.2.4

### Navigating to: Last Dests. (Last Destinations)

Every time you start a navigation, the destination data will be stored on the USB memory device. Thanks to this, you can always start navigating to your last destinations.

FIELD-Nav stores up to 25 destinations.

Destinations reached via the "ISOBUS-TC" application are not stored here.

In the picture below you can see what information the screen can contain:






Screen: *Navigate to: last destinations*




①	Screen name	③	Cursor
②	List of last destinations		

#### Controls

Function icon	Function
Delete	Delete entry from the list
Navigate	Navigate to destination
Return	Open start screen

#### Icons

Icon	Meaning
	Navigation to city center
	Navigation to coordinate
	Navigation to favorite

Icon	Meaning
	Navigation to address
	Navigation to address with house number
	Navigation to a field

### Procedure

This is how you navigate to one of the last destinations:

1. Open the start screen.
2. Press "Last Dests.".
  - ⇒ The following screen appears: "Navigate to: Favorites"
3. Click on the required destinations with the rotary knob.
  - or
  - Mark destination and press "Navigate".
    - ⇒ Navigation screen [→ 7] or screen: "Preparing navigation" [→ 21] appears.

## 4.2.5

### Navigating to: Coordinate

Every point on the map has its coordinates:

- Latitude (geographical latitude; Y-coordinate)
- Longitude (geographical longitude; X-coordinate)



If you know the exact coordinates of the destination, you can start navigation to the coordinates.

The coordinates must have these parameters:

- They must correspond with coordinate system WGS84.
- They must be marked in decimal degrees. For example: 51.6752444 and 8.5968392.

### Procedure

This is how you navigate to a coordinate:

1. Open the start screen.
2. Press "Coordinate".
  - ⇒ The following screen appears: "Navigate to: Coordinate"
3.  - Click "Latitude" to enter destination latitude.
4.  - Click "Longitude" to enter destination longitude.
5. Option A: Press "Save".
  - ⇒ The following screen appears: "Save coordinate".
6. In the "Save coordinate" screen enter the name under which the destination shall be saved.
  - ⇒ When saved, the following screen appears: "Navigate to: Favorite"
7. Option B: Press "Navigate".
  - ⇒ Navigation screen [→ 7] or screen: "Preparing navigation" [→ 21] appears.

#### 4.2.6

### Selecting the destination of navigation with ISOBUS-TC

If you process task with the "ISOBUS-TC" application, you start navigation directly from the "ISOBUS-TC" application.

The following options are available for this:

1. Navigating to a running task.
2. Displaying the fields of all tasks on the FIELD-Nav map, selecting the required field and navigating to that field.

#### Preconditions

To start navigation from the "ISOBUS-TC" application, you must first do the following in the Farm Management Information System:

- Mark field boundaries
- Set points of entry

The field boundaries and points of entry must be present on the USB memory device in the ISO-XML format together with the task.

Field boundaries and points of entry marked with FIELD-Nav cannot be selected directly from "ISOBUS-TC".

Read the chapters below to learn more.

#### Navigating to a running task

If you have started an task in the "ISOBUS-TC" application, you can start navigation directly to the field planned in the task.

#### Procedure

This is how you start navigation to a field:

- ☒ The task includes field boundaries or points of entry to the field to be processed.
- ☒ Task has been started.

1. Call up the ISOBUS-TC application.



2. - Navigate to field.

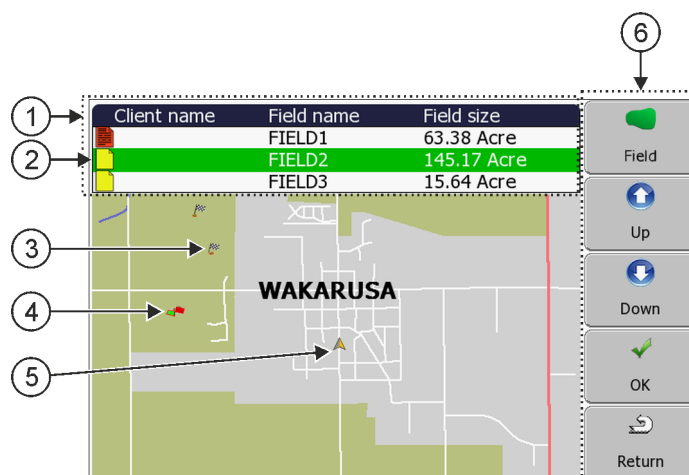
⇒ Navigation screen [→ 7] or screen: "Preparing navigation" [→ 21] appears.

#### Selecting fields

If you need to process several tasks with the "ISOBUS-TC" application, you can view the position of the respective fields on the FIELD-Nav map. This is how you can determine the optimum sequence for processing your tasks.

#### Illustration

In the picture below you can see what information the screen can contain:



Fields from the "ISOBUS-TC" application in the FIELD-Nav overview

①	Table with fields A task is allocated from the "ISOBUS-TC" application to every field. You will recognize the status of each task by the icon. The status is indicated with the same colors as in ISOBUS-TC.	④	Selected field on the map Selected field is marked with a red flag
②	Selected field in the table	⑤	Vehicle position
③	Not selected field on the map	⑥	Function icons

## Controls

Control element or text on function key	Function
	Zoom in/out view.
	Select field and open the respective task in the "ISOBUS-TC" application.
Field	Display field. Zooms in, so that selected field and its surroundings appear on the map.
Overview	Display overview. Zooms out, so that all fields appear on the map. Appears only if "Field" had been pressed before.
Up	Cursor moves one position up.
Down	Cursor moves one position down.
OK	Select field and open the respective task in the "ISOBUS-TC" application.
Return	Return to the "ISOBUS-TC" application without selecting a field.

## Procedure

This is how you select a field:

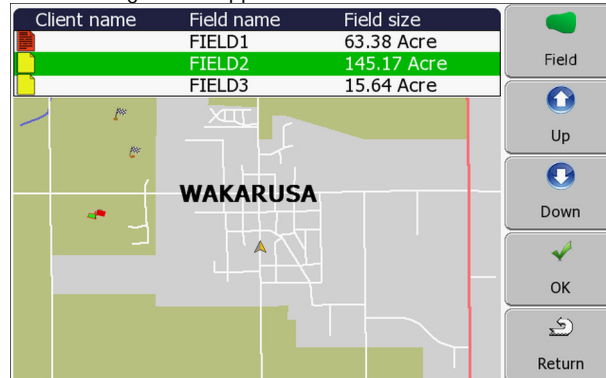
- ☒ You have several tasks with fields in the task list of the ISOBUS-TC.

1. Call up the ISOBUS-TC application.
2. Display task list.

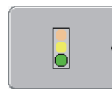


3. - Display fields in FIELD-Nav.

⇒ The following screen appears:



4. Mark required field in the table.  
⇒ The field will be marked with a red flag on the map.
5. Press "OK".  
⇒ Calling up the ISOBUS-TC application. The task appears in which the field you have selected shall be edited.



6. - Start task.



7. - Start navigation to field.

⇒ Navigation screen [→ 7] or screen: "Preparing navigation" [→ 21] appears.

## 4.3

### Preparing navigation

The "Preparing navigation" screen always appears only once after the start of the terminal.

You need to prepare the navigation after selecting the navigation destination [→ 13].

The aim of this preparation is to communicate everything about your vehicle to the navigation system. Once the navigation system has this information, it can calculate a route which takes into account the restrictions which apply to your vehicle. An example is the maximum speed.

In the picture below you can see what the "Preparing navigation" screen can look like. Different parameters may appear on the display than in the picture.

The screenshot shows the 'Preparing navigation' screen. It has a title bar at the top. Below it, there are several input fields and a table. On the right side, there are four function icons: 'Vehicle', 'Calculate', and 'Return'. Numbered callouts point to specific elements: 1 points to the title bar, 2 points to the destination input field, 3 points to the vehicle input field, 4 points to the parameter table, and 5 points to the function icons.

Parameter	Value
Route type:	Fast route
Weight:	20000 lb
<input checked="" type="checkbox"/> Forest roads	
<input checked="" type="checkbox"/> Avoid byways	
<input type="checkbox"/> Substance hazardous to waterways	

Preparing navigation screen

①	Screen name	④	Routing information The information will be taken from the vehicle profile you have used.
②	Information on destination	⑤	Function icons
③	Vehicle information The information will be taken from the vehicle profile you have used.		

## Controls

Function icon	Function
Vehicle	Changing vehicle parameters [→ 30] or selecting another vehicle
Calculate	Calculating a route with available settings
Return	Leave the screen

## Procedure

This is how you prepare navigation:

☒ The "Preparing navigation" screen is open:

1. Check if the information for the destination, vehicle and route is correct.
2. Should the information be incorrect, then adjust:
  - a) Change vehicle parameters [→ 30]
  - b) Change route parameters [→ 23]
3. When all information is correct, the press the "Calculate" function key to start route calculation.
  - ⇒ Route is being calculated.
  - ⇒ The following screen appears: "Navigation: Calculate route".
4. Read liability disclaimer and confirm with "OK". The liability disclaimer appears after the display starts up only for the first navigation.
5. Wait until the route has been calculated.
  - ⇒ The Navigation screen [→ 7] appears.

### 4.3.1 Changing route parameters

#### Route parameters

You can define the route calculation based on these parameters:


##### Route type

Three route types are available:

- Short route  
Shortest route to destination.
- Fast route  
Fastest route to destination. Bigger roads for higher speeds will be preferred.
- Original route  
A mix between short routes and fast routes.

#### Procedure

This is how you change the route parameters:

1.  - click on the required route parameter.  
⇒ The parameter status will change.

### 4.4 Viewing route overview

During routing, you can change the route parameters in the "Route overview" screen.

In the picture below you can see what information the "Route overview" screen contains.



Route overview screen

①	Screen name	④	Your position
②	Position of destination on the map	⑤	Remaining distance
③	Suggested route		

#### Controls

Function icon	Function
Dest. view	Show destination Shows a map cut-out with the destination being in the middle of the screen.
Overview	Show overview. Appears when "Dest. view" has been activated.

Function icon	Function
Alternative	<p>Calculate alternative route</p> <p><b>Original route</b></p> <p>The software shows the originally calculated route.</p> <p><b>Faster</b></p> <p>The software will search for a faster route.</p> <p><b>Shorter</b></p> <p>The software will search for a shorter route.</p>
Simulation	Simulate navigation to destination
Return	Leave the screen



## 5 Configuring FIELD-Nav

### 5.1 Master data administration

Master data is all farm and field parameters created with the help of FIELD-Nav Desktop or FIELD-Nav.

In this chapter you will learn how to administer master data by using FIELD-Nav.

Master data consists of:

- Farms
  - Field boundaries
  - Points of entry to fields
- Fields
- Vehicle profiles
- Favorites

You can create several farms in the master data. You can create several fields for each farm. You can define a field boundary and points of entry for each field.

#### NOTICE

##### Loss of data when synchronizing with FIELD-Nav Desktop

When synchronizing data between the USB memory device of the display and FIELD-Nav Desktop, the master data on the USB memory device will be overwritten if this data is older than the master data on the PC. Any changes to master data on the USB memory device will be lost in this process.

- Ensure that the time on the display matches the time on your PC.
- Do not edit master data simultaneously with FIELD-Nav Desktop and FIELD-Nav.

Read the chapters below to learn more.

#### 5.1.1 Farm master data

##### Creating farms

The farm pools together all fields that belong to the client/farmer.

##### Procedure

This is how you create a new farm:

1. Open the start screen.
2. Press "Fields".
3. Press "Farm".
4. Press "New" to create a new farm.

⇒ The following screen appears:

The following screen appears:



Parameter	Value
Name:	< Please insert >
Number:	< Please insert >
Town:	< Optional >

Save

Return

5. Mark and click the "Name" line.
6. Enter name for the new farm.

⇒ For example:

or example.

Insert name

FARM\_

Q

W

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}

<---

OK

Return

7. Press "OK".
  - ⇒ The following screen appears: "Create new farm"
  - ⇒ The name of the farm appears in the screen.
8. Mark and click the "Number" line.
  - ⇒ The data input screen appears.
9. Enter number for the farm. You can also use letters. The indicated number is used in FIELD-Nav Desktop as an ID.
10. Press "OK".
  - ⇒ The following screen appears: "Create new farm"
  - ⇒ The name you have entered for the farm appears in the screen.
11. Mark and click the "Town" line.
  - ⇒ The data input screen appears.
12. Enter town for the farm. This input is optional.
13. Press "OK".
  - ⇒ The following screen appears: "Create new farm"
  - ⇒ The town where the farm is located appears in the screen.
14. Press "Save".

⇒ The following screen appears.

Choose Farm		
Farm No.	Name	Town
1	FARM	BURR RIDGE

New

Edit

Fields

Selection

Return

The farm you have created appears in the screen.


⇒ You have created a new farm.

### Choosing farms

If you have created several farms, you can choose one of them. When you choose a field for navigation later on, only the fields of the farm chosen will be displayed.

#### Procedure

This is how you choose a farm:

1. Open the start screen.
  2. Press "Fields".
  3. Press "Farm".
    - ⇒ The following screen appears: "Choose Farm"
  4.  - Mark farm.
  5. Press "Selection".
    - ⇒ The following screen appears: "Navigate to: Field"
    - ⇒ In line "Farm" the name and town of the farm you have chosen appears.
    - ⇒ All fields allocated to this farm appear in the table.
- ⇒ You have chosen a farm.

## 5.1.2

### Field master data

You can view a field list on the display.

Each field has these parameters:

- Each field is allocated to a farm.
- Each field has a name, a number, a town (optional) and a crop type (optional).
- Fields can have field boundaries.
- Fields can have points of entry.

#### Procedure

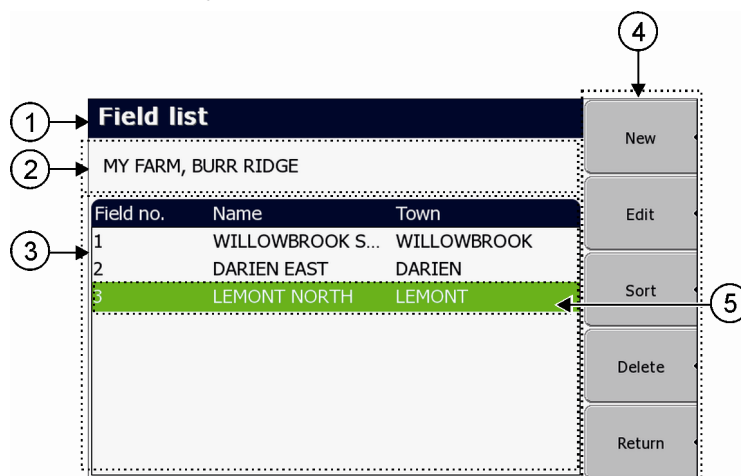
This is how you call up the "Field list" screen:

1. Open the start screen.
2. Press "Fields".
3. Press "Farm".
  - ⇒ The following screen appears: "Choose Farm"
4. In the table mark the farm whose fields should be shown.

5. Press "Fields".

⇒ The "Field list" screen appears.

In the picture below you can see what information appears on the screen:



"Field list" screen

①	Screen name	④	Function icons
②	Selected farm	⑤	Currently marked field
③	Overview of all the farm's fields		

## Controls

Function icon	Function
New	Creates a new field.
Edit	Edits the marked field.
Sort	Sorts the field by "Field no.", "Name" or "Town"
Delete	Deletes the marked field.
Return	Exits the screen.

## Creating fields

### Procedure

This is how you create a new field:

1. Call up the "Field list" screen for the farm to which a new field is to be added.
  2. Press "New".  
⇒ The following screen appears: "Create field"
  3. Enter "Name", "Number", "Town" and "Crop type". Crop types must have been previously created with FIELD-Nav.  
Use the keyboard as with Creating a farm. [→ 25]  
⇒ The field appears in screen: "Field list"
- ⇒ You have created a new field.

## Marking field boundaries

FIELD-Nav gives you the option to mark field boundaries. You can also draw field boundaries with FIELD-Nav Desktop. Marking in FIELD-Nav is more accurate than marking in FIELD-Nav Desktop, but more time-consuming.

Purpose of marking:

- Fields for which boundaries are marked are shown in green color on the map.
- FIELD-Nav can only navigate to fields for which boundaries have been marked or points of entry set.

What the marking does not provide:

- With the field boundary marked, the exact size cannot be calculated. The reason is that the field boundary is always drawn where the GPS receiver is situated during the drive. The farther the GPS receiver from the field boundary, the less precise the final size calculation.
- Field boundaries marked with FIELD-Nav cannot be used by TRACK-Leader. TRACK-Leader requires more accurate data. You can however mark the field boundary with FIELD-Nav while driving around the field with TRACK-Leader.


## Procedure

This is how you mark the field boundary:

- ☒ You are located in a field.

1. Open the start screen.
2. Press "Fields".
  - ⇒ The following screen appears: "Navigate to: Field"
  - ⇒ In line "Farm" the name of the farm to which the field is allocated appears. If it does not, Choose farm. [→ 27]



3.  - Mark the field in the table.
4. Press "Edit".
  - ⇒ The following screen appears: "Edit field"
5. Press "New border".
  - ⇒ Recording of the field boundary will start.
6. Drive along the field boundary with the vehicle.
  - ⇒ As you drive around the field, the field boundary will be represented on the map with red color.
7. Finish the drive in the starting point.
8. Press "Stop".
  - ⇒ The field will be represented on the map with green color. The field boundary is red.

## Importing field boundaries from TRACK-Leader

If you have already recorded field boundaries with TRACK-Leader, you can import these into FIELD-Nav.

To do this:

- ☒ You have created a field boundary in TRACK-Leader.
1. Load the file with the field boundary in TRACK-Leader.
  2. Export the file from TRACK-Leader in GIS format. You can read how to do this in the operating instructions of TRACK-Leader.
  3. Import the GIS file in FIELD-Nav Desktop.


4. Use FIELD-Nav Desktop to prepare the field boundary for FIELD-Nav.
  5. Insert the USB memory device into the display.
  6. Start FIELD-Nav.
- ⇒ You can now use the field boundary in FIELD-Nav.

### Setting points of entry to fields

The point of entry indicates the place in the field to which FIELD-Nav shall navigate.

#### Procedure

This is how you set the point of entry:

- ☒ In the master data you have created a field for which you now wish to set a point of entry.
  - ☒ The vehicle is now in the position which shall be saved as the point of entry.
1. Open the start screen.
  2. Press "Fields".
    - ⇒ The following screen appears: "Navigate to: Field"
    - ⇒ In line "Farm" the name of the farm to which the field is allocated appears. If it does not, Choose farm. [→ 27]
  3.  - Mark the field in the table.
  4. Press "Edit".
    - ⇒ The following screen appears: "Edit field"
  5. Press "New entry way".
    - ⇒ The point of entry will be marked with a black circle on the map. The point of entry is set precisely where the tractor is located.
    - Optionally you can also set multiple points of entry for a field.
- ⇒ You have set a point of entry.

#### 5.1.3

### Vehicle master data

With FIELD-Nav you can save several vehicle profiles on the USB memory device and choose them for navigation whenever necessary.

The vehicle profile is understood as the combination of tractor and agricultural implement.

#### Example

If your fleet includes two tractors and two implements, you must create four vehicle profiles if necessary.

- Tractor A and sprayer
- Tractor B and sprayer
- Tractor A and fertilizer spreader
- Tractor B and fertilizer spreader

Always create vehicle profiles for all of the combinations you use.

#### Procedure

This is how you call up the "Vehicle profile" screen:

- ☒ You have selected a destination for navigation.
  - ☒ The following screen is open: "Preparing navigation".
1. Press "Vehicle".
- ⇒ The following screen appears: "Vehicle profiles"

You now have the following options:

- Create new vehicle profile
- Edit existing vehicle profile
- Delete vehicle profile
- Select vehicle profile for navigation

### Editing vehicle profiles

Vehicle profiles are edited in the "Profile editor" screen.

In the table below you will find the explanation of all parameters you can enter when creating a vehicle profile.

Parameter	Explanation
Profile name	Name of vehicle profile
Max. speed	Maximum speed of vehicle You will avoid roads where the minimum speed is higher than the maximum speed of the vehicle.
Weight	Weight of the entire vehicle with trailed implement You will avoid roads and bridges where maximum permitted weight is lower.
Width	Width of vehicle at its widest point. This width is applicable for traffic use.
Height	Height of vehicle
Axle load	Highest axle load You will avoid roads and bridges where maximum permitted axle load is lower.
Avoid 'No trucks' roads	Shall the navigation system navigate via no-truck roads?
Highway	Shall the navigation system navigate also via highways?
Toll roads	Shall the navigation system navigate also via toll roads?
Forest roads	Shall the navigation system navigate also via forest roads?
Avoid byways	Shall the navigation system navigate also via byways? Byways are unpaved field roads, unpaved forest roads and impassible roads.
Substance hazardous to waterways	If the vehicle transports substances hazardous to waterways, it must avoid certain roads. If you check this point, then such roads will be avoided by the navigation system.
Dangerous goods	If the vehicle transports hazardous materials, it must avoid certain

Parameter	Explanation
	roads.  If you check this point, then such roads will be avoided by the navigation system.

**Procedure**

- ☑ The following screen is open: "Vehicle profile". [→ 30]
- 1. Press "New" to create a new vehicle profile.
- 2. Mark an existing vehicle profile and press "Edit" to edit this vehicle profile.
  - ⇒ The following screen appears: "Profile editor"
- 3. Select and click on the parameters with the rotary knob. In the table above these handling instructions you will find the parameters explained.
- 4. Press "Save" to save the data you have entered.
  - ⇒ The new vehicle profile or edited vehicle profile appears in the "Vehicle profile" screen.

**5.1.4****Favorites master data**

In the screen "Navigate to: Favorite" you can mark and save several destinations that are not fields. Such destination can be for example your own farm. Thanks to this, you can always start navigation to a farm when your work is finished.

**Procedure**

This is how you mark a destination as a "Favorite":

- ☑ The vehicle is now in the position which shall be saved as a "Favorite".
- 1. Open the start screen.
- 2. Press "Favorites".
  - ⇒ The following screen appears: "Navigate to: Favorite"
- 3. Press "New" to mark a new destination.
  - ⇒ The following screen appears: "New destination"
- 4. Enter the name for the destination.
  - ⇒ The place where you are currently located will be saved as a "Favorite".

**5.2****Changing software settings**

You can set these parameters:

**Profile**

The parameter opens the "Vehicle profile" screen. You can save vehicle profiles and select them for the vehicle navigation. [→ 31]

**Keyboard layout**

The parameter determines the order in which letters appear on the on-screen keyboards and in what language the keyboard appears. The following options are available for this:

- ABC – keys are displayed in alphabetical order
- QWERTZ/QWERTY – keys are displayed in the order matching the standard PC keyboard.

**Night mode**

In night mode the colors used on the keyboard are darker in order to avoid dazzling the user.



### Voice control

The parameter determines whether acoustic warnings appear.

Acoustic warnings inform you that you should turn soon.

There are two types of acoustic warnings:

- first signal 0.3 miles before a crossing where you should turn
- first signal 1.2 miles before a highway exit
- second signal right before the crossing where you should turn

## 5.3

### Map material

To be able to navigate with FIELD-Nav, you need a USB memory device with map material.

Map material can be copied to a USB memory device by using FIELD-Nav Desktop.

You can only navigate in areas covered by the map material.

#### Procedure

This is how you make the map material:

1. Insert an empty USB memory device into the display.
2. Start the display.
3. Open FIELD-Nav.
  - ⇒ The display will create the "FieldNav" folder on the USB memory device.
4. Remove the USB memory device.
5. Connect the USB memory device to the PC.
6. Start FIELD-Nav Desktop.
7. Read the display ID from the USB memory device with FIELD-Nav Desktop. The procedure is described in the operating instructions for FIELD-Nav Desktop.

## 6 Troubleshooting

The following table lists possible error messages and a short help for troubleshooting.

Error message text	Possible cause	Help for troubleshooting
CRC Error while reading the data medium.  Please restart the display or insert the data medium	No USB memory device is inserted.	Insert the USB memory device.
Registration required!	The trial version of FIELD-Nav has expired.	Register FIELD-Nav.
No valid starting point!	The current position cannot be matched to any road.	You may be situated outside the map cut-out.
No possible route!	No new route could be calculated.	
Name already exists	A data set with this name already exists.	Enter another name.
Cannot navigate, because the field has no entry or boundary.	The system does not know the position of the field.	Create a field in the master data. Mark field boundary or set point of entry.
Cannot navigate to destination area.	No route could be found.	Check your vehicle profile. You may not be authorized based on the parameters of your vehicle to drive to the destination area.
Field already exists, please delete first!	A field cannot be marked twice.	Delete field and create a new one again.
You are already in the destination area!	You cannot navigate to the destination area, because you are already in the destination area.	Choose a different destination.
Starting point is located near map boundary.	No route could be found, because you are located very close to the map boundary.	Drive on further down the map cut-out and retry navigation.
ATTENTION: Road is unpassable!	You have deviated from suggested route.  You are driving on a road which is blocked for your vehicle profile!	This warning message will disappear as soon as you are back on a road allowed for your vehicle profile.
Wait for new start way.	Navigation shall be started, but you are located on a blocked road (for your vehicle profile).	Leave the blocked road. Navigation will then start automatically.
Destination not in the map!	The destination is not located in the map cut-out you are using.	Create another map cut-out with FIELD-Nav Desktop.

Error message text	Possible cause	Help for troubleshooting
Target area is located near map boundary.	Route calculation failed. The destination you have chosen is very close to the map boundary.	Try to find an alternative destination which is close to your intended destination.
Name of destination already exists – save anyway?	A data set with this name already exists.	Enter another name.
Wait for a valid GPS signal!	The GPS signal is not working!	Check GPS signal